AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-50. (Canceled)

51. (New) A method for producing a binding moiety for use with a genetic vaccine, comprising:

(a) creating a library of recombinant polynucleotides from a plurality of parental polynucleotides, wherein said parental polynucleotides differ from each other by at least two nucleotides, said recombinant polynucleotides containing a region encoding a polypeptide comprising a nucleic acid binding domain;

(b) transfecting a population of host cells with a library of genetic vaccine vectors, said vectors comprising a recombinant polynucleotide of (a) and a binding site for the polypeptide encoded by the recombinant polynucleotides, under conditions such that the polypeptide is expressed and binds to the vector binding site to produce a vector-binding moiety complex;

(c) lysing the host cells under conditions that do not disrupt binding of the vector-binding moiety complex;

(d) contacting the vector-binding moiety complex with a target cell of interest;

(e) identifying target cells containing the vector; and

(f) isolating the recombinant polynucleotides from the target cells to produce a population of selected polynucleotides.

52. (New) The method of claim 51, wherein said vectors further comprise a selection marker.

53. (New) The method of claim 51, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

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54. (New) The method of claim 51, wherein said method is applied reiteratively to said selected polynucleotides.

55. (New) The method of claim 51, wherein said recombinant polypeptides further comprise a ligand that binds to the surface of the target cell of interest.

56. (New) The method of claim 55, wherein said ligand comprises a cell-specific ligand.

57. (New) The method of claim 55, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.

58. (New) The method of claim 55, wherein said ligand comprises an enterotoxin receptor binding domain.

59. (New) The method of claim 58, wherein said enterotoxin receptor binding domain is obtained from a *cholerae* enterotoxin, an *E. coli* enterotoxin, a salmonella toxin, a shigella toxin, and a campylobacter toxin.

60. (New) The method of claim 58, wherein said enterotoxin receptor binding domain is a non-toxic binding domain.

61. (New) The method of claim 55, wherein said vectors further comprise a selection marker.

62. (New) The method of claim 55, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

63. (New) The method of claim 51, wherein said method is applied reiteratively to said selected polynucleotides.

64. (New) The method of claim 55, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.

65. (New) The method of claim 55, wherein said ligand comprises an enterotoxin receptor binding domain.

66. (New) The method of claim 65, wherein said enterotoxin receptor binding domain is obtained from a *cholerae* enterotoxin, an *E. coli* enterotoxin, a salmonella toxin, a shigella toxin, and a campylobacter toxin.

67. (New) The method of claim 65, wherein said enterotoxin receptor binding domain is a non-toxic binding domain.

68. (New) The method of claim 56, wherein said vectors further comprise a selection marker.

69. (New) The method of claim 55, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

70. (New) The method of claim 51, wherein said method is applied reiteratively to said selected polynucleotides.

71. (New) A method for producing a binding moiety for use with a genetic vaccine, comprising:

(a) creating a library of recombinant polynucleotides from a plurality of parental polynucleotides, wherein said parental polynucleotides differ from each other by at least two nucleotides, said recombinant polynucleotides containing a region encoding a polypeptide comprising a nucleic acid binding domain and a region encoding a ligand that binds to the surface of a cell of interest;

(b) transfecting a population of host cells with a library of genetic vaccine vectors, said vectors comprising a recombinant polynucleotide of (a), a selection marker, and a binding site for the polypeptide encoded by the recombinant polynucleotides, under conditions such that the polypeptide is expressed and binds to the vector binding site to produce a vector-binding moiety complex;

(c) lysing the host cells under conditions that do not disrupt binding of the vector-binding moiety complex;

(d) contacting the vector-binding moiety complex with a target cell of interest;

(e) identifying target cells containing the vector; and

(f) isolating the recombinant polynucleotides from the target cells to produce a population of selected polynucleotides.

72. (New) The method of claim 71, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

73. (New) The method of claim 71, wherein said method is applied reiteratively to said selected polynucleotides.

74. (New) The method of claim 71, wherein said ligand comprises a cell-specific ligand.

75. (New) The method of claim 71, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.

76. (New) The method of claim 74, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.

77. (New) The method of claim 71, wherein said ligand comprises an enterotoxin receptor binding domain.

78. (New) The method of claim 77, wherein said enterotoxin receptor binding domain is obtained from a *cholerae* enterotoxin, an *E. coli* enterotoxin, a salmonella toxin, a shigella toxin, and a campylobacter toxin.

79. (New) The method of claim 77, wherein said enterotoxin receptor binding domain is a non-toxic binding domain.

80. (New) A method for producing a cell-specific binding moiety useful for increasing the uptake of a genetic vaccine by a target cell, comprising:

(a) creating a first library of recombinant polynucleotides from a plurality of parental polynucleotides, wherein said parental polynucleotides differ from each other by at least two nucleotides, said recombinant polynucleotides containing a region encoding a polypeptide comprising a nucleic acid binding domain;

(b) creating a second library of recombinant polynucleotides from a plurality of parental polynucleotides, wherein said parental polynucleotides differ from each other by at least two nucleotides, said recombinant polynucleotides containing a region encoding a ligand that binds to the surface of a cell of interest;

(c) recombining recombinant polynucleotides from said first and second libraries to produce a third library of recombinant polynucleotides, said recombinant polynucleotides containing a region encoding a polypeptide comprising a nucleic acid binding domain a region encoding a ligand that binds to the surface of a cell of interest;

(d) transfecting a population of host cells with a library of genetic vaccine vectors, said vectors comprising a recombinant polynucleotide of (c) and a binding site for the polypeptide nucleic acid binding domain encoded by the recombinant polynucleotides of (c), under conditions such that the polypeptide in the vector is expressed and binds to the vector binding site to produce a vector-binding moiety complex;

(e) lysing the host cells under conditions that do not disrupt binding of the vector-binding moiety complex;

(f) contacting the vector-binding moiety complex with a target cell of interest;

(g) identifying target cells containing the vector; and

(h) isolating the recombinant polynucleotides from the target cells to produce a population of selected polynucleotides.

81. (New)) The method of claim 80, wherein said genetic vaccine vector further comprise a selection marker.

82. (New) The method of claim 80, wherein said third library of polynucleotides comprises all possible combinations of polynucleotides from said first and second libraries.

83. (New) The method of claim 80, wherein said ligand comprises a cell-specific ligand.

84. (New) The method of claim 80, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.

85. (New) The method of claim 80, wherein said ligand comprises an enterotoxin receptor binding domain.

86. (New) The method of claim 85, wherein said enterotoxin receptor binding domain is obtained from a *cholerae* enterotoxin, an *E. coli* enterotoxin, a salmonella toxin, a shigella toxin, and a campylobacter toxin.

87. (New) The method of claim 85, wherein said enterotoxin receptor binding domain is a non-toxic binding domain.

88. (New) The method of claim 80, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

89. (New) The method of claim 80, further comprising:

(i) creating a library of recombinant polynucleotides from a plurality of the selected polynucleotides of (h), wherein said selected recombinant polynucleotides differ from each other by at least two nucleotides, said recombinant polynucleotides containing a region encoding a polypeptide comprising a nucleic acid binding domain and a region encoding a ligand that binds to the surface of a cell of interest;

(j) transfecting a population of host cells with a library of genetic vaccine vectors, said vectors comprising a recombinant polynucleotide of (i) and a binding site for the polypeptide nucleic acid binding domain encoded by the recombinant polynucleotides of (i), under conditions such that the polypeptide in the vector is expressed and binds to the vector binding site to produce a vector-binding moiety complex;

(k) lysing the host cells under conditions that do not disrupt binding of the vector-binding moiety complex;

(l) contacting the vector-binding moiety complex with a target cell of interest;

(m) identifying target cells containing the vector; and

(n) isolating the recombinant polynucleotides from the target cells to produce a population of second generation further selected polynucleotides.

90. (New) The method of claim 89, further comprising repeating the method of claim 89 in an iterative manner.

91. (New) The method of claim 89, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

92. (New) The method of claim 90, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.

93. (New) The method of claim 81, further comprising:

(i) creating a library of recombinant polynucleotides from a plurality of the selected polynucleotides of (h), wherein said selected recombinant polynucleotides differ from each other by at least two nucleotides, said recombinant polynucleotides containing a region encoding a polypeptide comprising a nucleic acid binding domain and a region encoding a ligand that binds to the surface of a cell of interest;

(j) transfecting a population of host cells with a library of genetic vaccine vectors, said vectors comprising a recombinant polynucleotide of (i) and a binding site for the polypeptide nucleic acid binding domain encoded by the recombinant polynucleotides of (i), under conditions such that the polypeptide in the vector is expressed and binds to the vector binding site to produce a vector-binding moiety complex;

(k) lysing the host cells under conditions that do not disrupt binding of the vector-binding moiety complex;

(n) contacting the vector-binding moiety complex with a target cell of interest;

(o) identifying target cells containing the vector; and

(n) isolating the recombinant polynucleotides from the target cells to produce a population of second generation further selected polynucleotides.

94. (New) The method of claim 93, further comprising repeating the method of claim 93 in an iterative manner.

95. (New) The method of claim 93, wherein said target cell is selected from the group consisting of muscle cells, monocytes, macrophages, dendritic cells, B cells, Langerhans cells, keratinocytes, and intestinal M-cells.

96. (New) The method of claim 94, wherein said ligand is selected from the group consisting of CD2, CD28, CTLA-4, CD40, CD40 ligand, fibrinogen, fibronectin, factor X, ICAM-1, glycan, and an Fc portion of immunoglobulin G molecule.